What is claimed is:

1. A wireless radio communications system that includes at least one communications tower and a mobile unit configured to transmit a chirp-on-demand signal, the system comprising:

a base station configured to issue a wireless command to the mobile unit, the wireless command instructing the mobile unit to transmit a chirp-on-demand signal; and

a location receiver operatively connected to the at least one communication tower configured to receive the chirp-on-demand signal from the mobile unit and decode the signal for determining a location calculation of the mobile unit.

2. The system of claim 1 wherein the location receiver is configured to decode the chirp-on-demand signal based on a pattern of frequency, amplitude, and timing.

3. The system of claim 1 wherein the mobile unit is a cellular telephone.

4. A geographically locatable cellular telephone having chirp-on-demand capabilities, the geographically locatable cellular telephone comprising:

a chirp-on-demand instruction receiver integrated in the geographically locatable cellular telephone, the chirp-on-demand instruction receiver configured to receive and interpret a chirp-on-demand instruction signal transmitted wirelessly from a cellular communications tower to the locatable cellular telephone during a pre-established call requiring geographic location services associated with a geographic location of the cellular telephone, for the purpose of geographically locating the locatable cellular telephone; and

a transmission modulator integrated in the geographically locatable cellular telephone, the transmission modulator configured to modulate in a pattern the frequency, amplitude, and timing of a wireless radio frequency signal emanating from the geographically locatable cellular telephone, the pattern being pre-selected to provide a recognizable chirp-on-demand signal useful in geographically locating the cellular telephone.

5. The geographically locatable cellular telephone of claim 4 wherein the pre-established call is transmitted on a channel separate from the wireless radio frequency signal used to provide a chirp-on-demand signal.

6. The geographically locatable cellular telephone of claim 4 wherein the pre-established call is carried on the wireless radio frequency signal.

7. A cellular telephone system designed for determining the location of a cellular telephone, the system comprising:

a first cellular telephone transmission tower;

a second cellular telephone transmission tower configured for communication with the first cellular telephone transmission tower over a calibrated transmission line extending between the first and second cellular telephone transmission towers;

an interferometer link configured to determine a current local propagation characteristic from a measurement of a test signal transmitted on the calibrated transmission line between the first cellular telephone transmission tower and the second cellular telephone transmission tower;

a receiver configured to receive a communication signal from a cellular telephone transmitting from an unknown location to be identified and to calculate a distance to the unknown location of the cellular telephone, the calculation being responsive to the current local

propagation characteristic and a measurement of the communication signal received at the receiver.

8. The cellular telephone system of claim 7 wherein the current local propagation characteristic is speed of electromagnetic radiation.

9. The cellular telephone system of claim 7 wherein the current local propagation characteristic is propagation loss.

10. The cellular telephone system of claim 7 wherein data representing the current local propagation characteristic is distributed to a third cellular telephone transmission tower.

11. The cellular telephone system of claim 7 wherein the receiver and the interferometer link are located at the first cellular telephone transmission tower.

12. The cellular telephone system of claim 10 wherein the receiver is located at the third cellular telephone transmission tower.

13. A method of determining a location of a cellular telephone, the method comprising:

sensing a communication signal transmitted from a cellular telephone transmitting from an unknown location, the cellular telephone having indicated a need for geographic location based services;

transmitting a test signal on a calibrated transmission line between a first cellular telephone transmission tower and a second cellular transmission tower;

receiving the transmitted test signal;

measuring a test propagation characteristic of the transmitted test signal, the test propagation characteristic indicating a current local propagation characteristic of freespace in the area near the first cellular telephone transmission tower around the time of sensing the communication signal;

measuring an actual propagation characteristic of the sensed communication signal; calculating a distance from the first cellular telephone transmission tower to the cellular telephone, the calculation being responsive to the test propagation characteristic and the actual propagation characteristic.

14. The method of claim 13 wherein the current local propagation characteristic is speed of electromagnetic radiation.

15. The method of claim 13 wherein the current local propagation characteristic is propagation loss.

16. The method of claim 13 wherein the sensing is performed before transmitting the test signal.

17. The method of claim 16 wherein transmitting the test signal is initiated in response to the sensing.